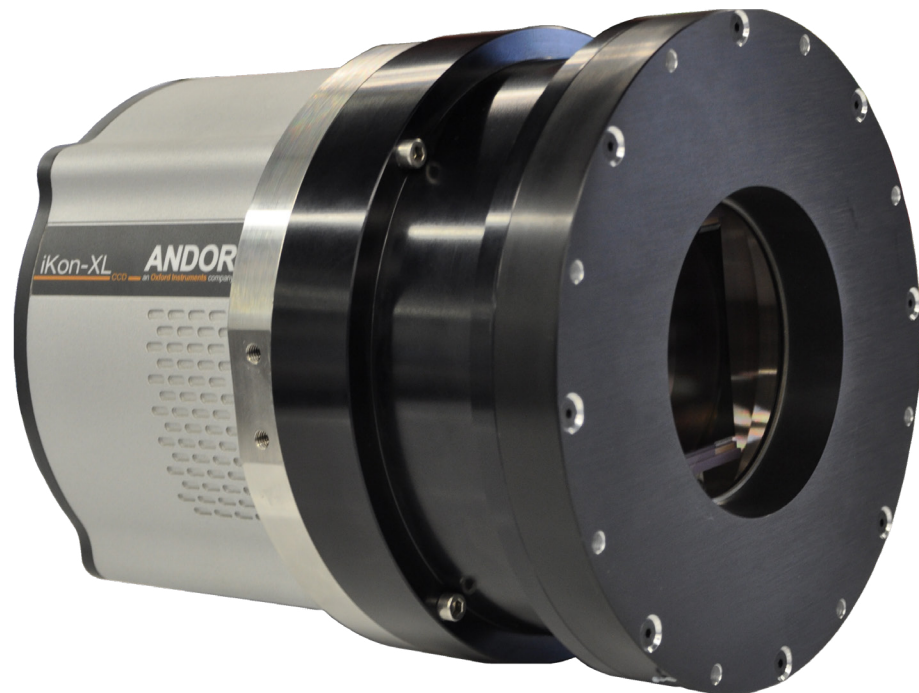


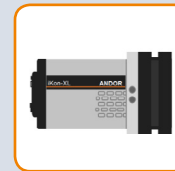
# iKon-XL (Deep Cooled) Quick Start Guide



## 2 Unpacking your Camera



Camera



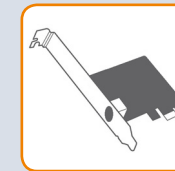
iKon-XL  
CCD Camera  
(Deep-cooled  
model)



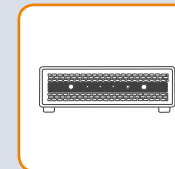
Accessories



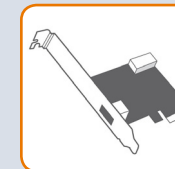
Software & Driver  
CD(s) or Flash Drive



Fibre Optic  
PCIe Card



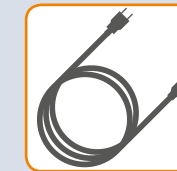
CCU-500B Camera  
Controller\*



USB 3.0 Card



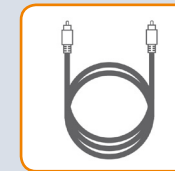
Cables



Country Specific  
Power Cord



Camera Control  
Cable\*



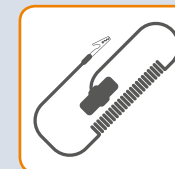
Fibre Optic  
(LC-LC)



BNC-SMA  
Cable (x3)



USB 3.0 Cable



Anti-Static Strap

\* CCU-500 units are configured to operate only with the supplied CCU-500 to camera control cable.

## 1 Preparing your Facility



Handle the camera and accessories with care.  
iKon-XL weighs approx 12 kg [28 lb 7 oz].



Operate between 0°C and 30°C  
Store between -30°C and 50°C.



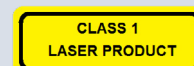
Observe anti-static precautions when  
installing the camera.



Liquid cooler must be connected and running  
before switching on the camera. Refer to Section 5  
for further guidelines.



Operation of the camera close to intense  
pulsed sources (e.g. plasma and X-ray  
sources) may compromise performance.



This is a Class I laser product.



Keep dry, <70% humidity non-condensing.



Use correct power supply and cables.

Refer to the hardware guide for further guidelines.

## 3 Installing Software (Solis or SDK)

**You must have administrator access on your PC to perform this installation.**

The same instructions cover the installation procedure for Andor's Solis, or if using third party software, Andor SDK.

**Windows:** Switch on the PC, insert the CD (or access the download location) and run the setup exe e.g **AndorSDKSetup-<version>.exe**

1. Confirm the version of software.
2. Follow the on screen prompts.
3. Select the installation directory when prompted.
4. If prompted for camera type select **iKon-XL**
5. On the final window click on **"Install"**. Continue to follow the on screen prompts.
6. To complete the installation, when prompted select **"Yes, restart the computer now"** and click on the finish button.

**Linux:** Switch on the PC, then unpack the archive that you have received. In the following steps replace <version> with the version number of the archive you have. E.g. 2.102.30000.0

1. Open a terminal.
2. Change the directory to where the **andor-<version>.tar.gz** file is located.
3. Type **"tar -zxvf andor-<version>.tar.gz"**.
4. A new directory named **"andor"** is created.
5. To install the SDK run the script **"install\_andor"** from the **andor** directory and follow the on screen prompts. (See the **INSTALL** file located in the same directory for further information).

## 4 Installing the Fibre Optic Adapter or USB 3.0 Card



Ensure your PC is powered off. Ensure anti-static precautions using the anti-static strap provided. Keep all screws safe.

1. Unplug all cables from the rear of the computer.
2. Open the PC enclosure to gain access to the expansion slots.
3. Locate a suitable PCIe slot for either **fibre optic** or **USB 3.0** cards: x4, x8 x16 PCIe recommended. Note that x1 slots may be shared with other devices resulting in reduced system performance. If you are unsure which slot is correct, please consult the PC user manual.
4. Remove the filler bracket corresponding to the slot you intend to use.
5. Remove the PCIe card carefully from its protective ESD packaging and insert the card connector fully into the expansion slot.
6. Ensure the card's mounting bracket is flush with any other mounting or filler brackets to either side of it, then secure the controller card in place.
7. Fit the computer cover and any accessories that you were using previously.

### Installing the Fibre Optic or USB 3.0 Card Drivers

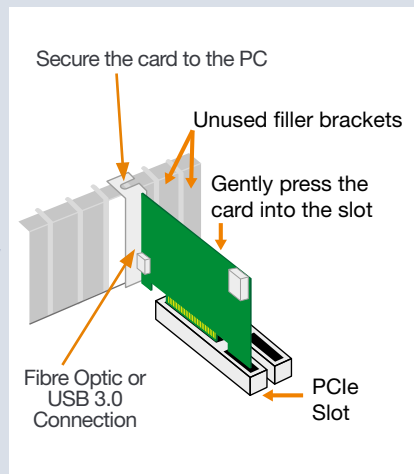
1. Install the supplied drivers to ensure that the latest supported drivers are used.
2. Fibre optic adapter card drivers need to be installed before the PC is connected to the camera. These are not part of the Solis/SDK installation and need to be installed manually from the supplied software disc (Refer to the iKon-XL Hardware Guide Section 3.10 to 3.12 for further information - this is available from the **Product Manuals CD** or **MyAndor**).
3. Once the drivers are installed, the fibre optic adapter card should be detected automatically.

### Disable Power Management for the USB 3.0 Host Controller

It is recommended that power management should be disabled to ensure optimum camera response and performance.

**Note you will need administrator access to perform these steps**

1. Navigate to '**USB 3.0 Host Controller**' properties menu in **Device Manager** (Control Panel>Device Manager>Universal Serial Bus Controllers).
2. Select the **Advanced** tab.
3. Check the **Disable USB 3.0 power management functions** checkbox.



## 5 Camera Cooling Guidelines

- The iKon-XL must be connected, via its 2 coolant pipes before operation, to a re-circulating cooler or other liquid cooling system.
- Always use coolant that is above the dew point of the ambient environment to prevent condensation from occurring.
- To achieve -95°C [-100°C] cooling:
  - **Coolant temperature:** should be no greater than 16°C [10°C].
  - **Recommended coolant:** water or water/glycol mix depending on the ambient environmental temperature during operation.
- Ensure that all liquid coolant has been expelled from the camera after operation if it is to be stored or shipped.

## 6 Connecting your Camera and Switching it on

Please refer to the iKon-XL Hardware Guide for mounting instructions

Ensure that the power to the camera and PC is switched OFF.

1. Attach the camera control cable between the camera and the CCU-500 camera controller. **Use only the supplied cable** - each CCU-500 is configured specifically for use with the supplied cable. Also ensure the power cable is fully inserted into the camera power socket.

2. Connect by either:

- **Fibre optic** - connect the cable between the camera and the PC's fibre optic adapter port.
- **USB 3.0** - connect the cable between the camera's USB 3.0 port and a USB 3.0 port on the PC.

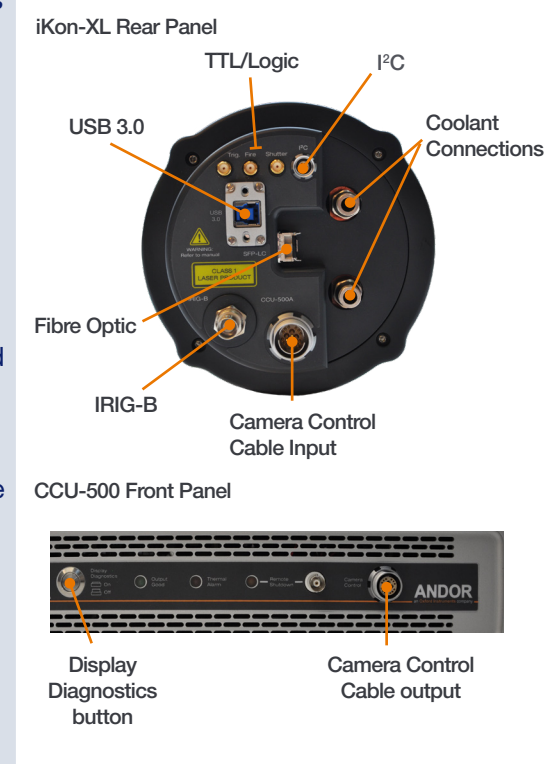
3. Switch the power supply on using the on/off switch at the rear of the camera controller (You should hear a long beep from the CCU-500). This is followed by a long beep, followed by two short beeps to indicate the camera has configured successfully.

4. Now turn on the PC.

Note: If this is the first time the camera has been connected, please install the fibre optic or USB 3.0 card drivers.

5. Start your software.
6. Check the acquisition settings and adjust as required.
7. Start acquiring data.

- Ensure that the iKon-XL is powered on and connected to the PC via the fibre optic cable or USB 3.0 before the PC is switched on.
- Ensure that all cables have adequate strain relief/support, especially the fibre optic connection.
- Remote power down is activated by applying 5 volt @ 10mA to remote BNC at front of the CCU-500.



## Troubleshooting

### Camera start-up tone does not sound on start-up

- The camera start-up tone (a double beep) should be audible momentarily when the camera is powered up.
- If this does not occur, ensure that the camera is connected to the CCU-500

### Support Device not recognised when plugged into PC

- Check that the card and driver(s) have been installed correctly (Devices and printers) in Windows, Control Panel. The camera will show under the Devices list. (see also Section 4 for installation procedure).

### Temperature Trip Alarm sounds (continuous tone)

Should the buzzer sound ensure the following:

- Check that the cooling system is operating correctly.
- NOTE: Always use water that is above the dew point of the ambient environment to prevent condensation from occurring.

### Lights not showing on CCU-500

- A button (see Section 6) enables lights to be on for diagnostic purposes or switched off for low-light applications- check if this is activated.



For additional technical information about the iKon-XL series go to: [andor.com/scientific-cameras](http://andor.com/scientific-cameras)  
Please check **MyAndor** for the latest iKon-XL manuals: [my.andor.com/login.aspx](http://my.andor.com/login.aspx)